

## Plantae Chinenses Forrestianae.

Plants discovered and collected by George Forrest during his first exploration of Yunnan and Eastern Tibet in the years 1904, 1905, and 1906.

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### Enumeration and Description of Species of Orchidaceae.

BY

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With Plates LXXVI.-LXXXIV.

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**Cypripedium corrugatum**, Franch. in Journ. de Bot. viii (1894), p. 251; I.F.S. iii, p. 64.

"Plant of 6-12 inches. Petals and sepals yellowish-purple, veined deep purple; rostellum purple-maroon; labellum very deep purplish-maroon, in some plants almost black. Open mountain meadows and on the margins of pine forests on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 10-11,000 ft. June 1906." G. Forrest. No. 2322.

**Cypripedium fasciolatum**, Franch. in Journ. de Bot. viii (1894), p. 232; I.F.S. iii, p. 64.

"Plant of 9-12 inches. Flowers veined and streaked purplish-rose, non-fragrant. Labellum inflated, 1×1 inch. Dry, stony situations in open pine forests on the eastern flank of the Lichiang Range. Lat. 27° 30' N. Alt. 11,000 ft. June 1906." G. Forrest. No. 2429.

**Cypripedium luteum**, Franch. in Plant. David. ii, p. 126; I.F.S. iii, p. 65.

"Plant of 8-16 inches. Flowers pale yellow, marked and veined pale violet. Shady, stony situations in pine forests on [Notes, R.B.G., Edin., No. XXIV., January 1912.]

the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 12' N$ . Alt. 10-11,000 ft. June 1906." G. Forrest. No. 2341.

**Cypripedium arietinum**, R. Br. in Ait. Hort. Kew, ed. 2, v, p. 222; I.F.S. iii, p. 63.

"Plant of 6-12 inches. Flowers, petals and sepals brownish-green, labellum pink, veined purplish-green, apex green. Dry, shady situations in pine forests on eastern flank of the Lichiang Range. Lat.  $27^{\circ} 10' N$ . Alt. 9-10,500 ft. May 1906." G. Forrest. No. 2198.

**Cypripedium margaritaceum**, Franch. in Bull. Soc. Phil. Par. sér. 7, xii (1891), p. 141; I.F.S. iii, p. 66.

"Plant of 6-9 inches. Leaves coriaceous, spotted livid purple. Petals and sepals yellowish-green, spotted purple. Rostellum reddish-purple. Labellum much inflated,  $2 \times 1$  inch, fleshy and extremely brittle, pale yellow, spotted livid purple and densely covered with purplish glandular hairs. Moist, stony situations in pine forests on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 30' N$ . Alt. 11,000 ft. June 1906." G. Forrest. No. 2264.

**Cypripedium ebracteatum**, Rolfe.

"Plant of 2-6 inches. Flowers greenish-yellow, with deep purplish-maroon markings. Dry, shady situations in pine forests on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 9-11,000 ft. July 1906." G. Forrest. No. 4855.

**Orchis Giraladiana**, Kränzlin in Engler's Bot. Jahrb. xxxvi, Beibl. 82, p. 25.

"Plant of 5-8 inches. Flowers rich rose-purple. Grassy openings in and on the edges of rhododendron forests on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 18' N$ . Alt. 10-11,000 ft. June 1906." G. Forrest. No. 2368.

"Plant of 6-14 inches. Flowers deep rose-purple. Boggy meadows on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 8-10,000 ft. May-June 1906." G. Forrest. No. 4867.

"Plant of 3-8 inches. Flowers rose-purple marked a deeper shade. Stony mountain meadows on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 10,000 ft. June-July 1906." G. Forrest. No. 4875.

**Orchis latifolia**, Linn., var.

"Plant of 9-15 inches. Flowers rose-purple, with deeper markings. Moist pastureland on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 9-10,000 ft. August 1906." G. Forrest. No. 4887.

**Orchis tetraloba**, Schltr. Comb. nov.

*Peristylus tetralobus*, Finet in Rev. Génér. Botan. xiii (1901), p. 524.

This plant is better regarded as a species of the genus *Orchis*, Linn. It is nearly allied to *O. puberula*, King and Pantl. from the Himalayas. The plant is well figured by Finet on t. 13 of the above-mentioned publication.

"Plant of 6-10 inches. Flowers pale rose. Moist, stony mountain meadows on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8-9000 ft. May-June 1906." G. Forrest. No. 4862.

"Plant of 10-14 inches. Flowers purplish-rose. Moist mountain meadows on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8-10,000 ft. June 1906." G. Forrest. No. 4863.

This has been collected before by Delavay.

**Orchis basifoliata**, Schltr. Comb. nov.

*Peristylus tetralobus*, Finet, var. *basifoliatus*, Finet in Rev. Génér. Botan. xiii (1901), p. 524.

A species nearly allied to, but quite distinct from *O. tetraloba*, (Finet) Schltr. Finet considered it to be only a form, but the distinguishing characters fully justify its being regarded as a distinct species. The plant is well figured, too, by Finet on the t. 13 of the above-mentioned publication.

"Plant of 5-8 inches. Flowers pure white, basal portion of labellum, with a few markings of pale purple, faintly fragrant. Very boggy open situations at base of eastern flank of the Lichiang Range. Lat. 27° 10' N. Alt. 8500 ft. July 1906." G. Forrest. No. 2544.

**Orchis spathulata**, Rchb. f., ex Hook. f., Fl. Brit. Ind. vi, p. 127; I.F.S. iii, p. 50. Finet in Rev. Génér. Bot. xiv (1901), p. 516.

"Plant of 2-4 inches. Flowers rose-purple. Moist, stony mountain pasture on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 11,000 ft. August 1906." G. Forrest. No. 4886.

**Herminium ophioglossoides**, Schltr. Sp. nov. Plate lxxvi.

Terrestre, erectum, pusillum, 9-22 cm. altum; tuberibus oblongoideis, radicibus flexuosis; folio basilari singulo, erecto vel erecto-patente elliptico-ligulato vel oblanceolato-elliptico, obtuso vel subacuto, glabro, basi scapum amplexente, 4-7 cm. longo, medio vel supra medium 1.2-2 cm. lato; inflorescentia stricta vel substricta, scapo tereti glabro, vulgo evaginulato, spica subdense vel sublaxe 9-multiflora, ut videtur subsecunda, usque ad 10 cm. longa; bracteis lanceolatis, acuminatis, glabris, ovarium aequantibus vel paulo superantibus; floribus illis *H. Monorchis*, R. Br. similibus sed majoribus, virescenti-flavidis, glabris, inodoris, sepalo intermedio ovato, obtuso, 0.4 cm. longo, lateralibus oblique lanceolato-ligulatis, obtusis, aequilongis; petalis e basi oblique lanceolata angustatis linearibus obtusis, 0.6 cm. longis; labello e basi oblonga e tertia parte basilari trifido, segmentis anguste linearibus subacutis, intermedio lateralibus duplo majore, 0.4 cm. longo, labello toto 0.6 cm. longo, calcare brevi, sacciformi, conico, obtuso, ovario cylindraceo, glabro, c. 0.7 cm. longo.

"Plant of 3-8 inches. Flowers greenish-yellow. Moist, grassy situations by streams at base of the eastern flank of the Lichiang Range. Lat. 27° 12' N. Alt. 10-11,000 ft. June 1906." G. Forrest. No. 2466.

This little species is nearly allied to *H. Monorchis*, R. Br. and *H. alaschanicum*, Maxim. It differs by the bare scape and the single basal leaf, as well as in the size of the flowers and the shape of the lip. The plant quoted by Finet (Rev. Génér. Bot. xiii, p. 518), from Hee-chan-men (Yunnan), *Delavay* No. 86, under *Herminium Monorchis*, R. Br. belongs to this species.

**Herminium Forrestii**, Schltr. Sp. nov. Plate lxxvii. A.

Terrestre, erectum, humile, c. 10-13 cm. altum; tuberibus oblongoideis; radicibus filiformibus elongatis, flexuosis, puberulis, foliis basilaribus 2, erecto-patentibus, ellipticis vel oblongo-elliptis, acutis, basi scapum amplexentibus; inflorescentiis strictis, scapo tereti glabro, evaginulato, spica dense multiflora 2.5-4 cm. longa, c. 1 cm. diametiente; bracteis erecto-patentibus, ovatis, acutis vel acuminatis, ovario duplo fere brevioribus; floribus in genere inter majores, erecto-patentibus, fragrantissimis, glabris; sepalo intermedio ovato, obtuso 3.5 mm. longo, lateralibus oblique oblongo-ligulatis, obtusis, intermedio aequilongis; petalis oblique lanceolato-ligulatis, obtusis, sepalis subaequilongis; labello e basi subauriculata,

ovato obtusiuscule acutato, supra basin medio lamellis 2 parallelis, basi paulo ampliatis antice leviter divergentibus, in medio labelli terminatis ornato, sepalis aequilongo, infra medium 2.5 mm. lato, anthera humili, canalibus perbrevis, rostello triangulo; ovario cylindraceo-fusiformi, glabro, c. 0.5 cm. longo.

"Plant of 3-6 inches. Flowers green, deliciously fragrant, odour resembling vanilla. Open mountain meadows on the eastern flank of the Lichiang Range. Lat. 27° 15' N. Alt. 11-12,000 ft. July 1906." No. 2590.

This interesting species is closely allied to the Himalayan *H. Josephi*, Rchb. f., but has a dense many-flowered inflorescence of smaller flowers and broader leaves. Besides, there are distinct differences in the shape and the keels of the labellum.

***Herminium forceps*, Schltr. Comb. nov.**

*Peristylus forceps*, Finet in Rev. Génér. Botan. xiii (1901), p. 521.

"Plant of 4-8 inches. Flowers green, fragrant. Stony mountain meadows on the eastern flank of the Lichiang Range. Lat. 27° 20' N. Alt. 11-12,000 ft. October 1906. G. Forrest. No. 3075.

This plant should rather be regarded as a species of *Herminium*.

***Herminium coeloceras*, Schltr. Comb. nov.**

*Peristylus coeloceras*, Finet in Rev. Génér. Botan. xiii, p. 519.

"Flowers rose-purple and white, fragrant. Dry pasture on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 9-10,000 ft. July-August 1906." G. Forrest. No. 4878.

This species as well should be regarded as a *Herminium*. To the same genus belongs *H. ecalcaratum*, Schltr., which has also been published by Finet as *Peristylus*, and is too a plant from Yunnan.

***Herminium unicorn*, Kränzlin.**

"Plant of 3-8 inches. Flowers white, fragrant. Dry, stony pastureland at the base of the eastern flank of the Lichiang Range. Lat. 27° 12' N. Alt. 8500-9000 ft. July 1906." G. Forrest. No. 2583.

***Herminium Souliei*, Rolfe in I.F.S. iii, p. 51.**

"Plant of 8-12 inches. Flowers green. Grassy openings in pine forests on the eastern flank of the Tali Range. Lat. 25°

40' N. Alt. 9-11,000 ft. June-July 1906." G. Forrest. No. 4864.

This is known from Szechuan, Tongolo (Soulié).

**Herminium angustifolium**, Benth. ex Hook. f., Fl. Brit. Ind. vi, p. 129; I.F.S. iii, p. 50; Finet in Rev. Génér. Botan. xiii (1901), p. 517.

"Plant of 12-15 inches. Flowers greenish-white. Grassy openings in pine forests on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 11-12,000 ft. September 1906." G. Forrest. No. 2876.

"Plant of 10-15 inches. Root tuberous. Flowers green, fragrant. Dry, stony situations on grassy slopes on the eastern flank of the Lichiang Range. Lat. 27° 20'. Alt. 10-11,000 ft. July 1906." G. Forrest. No. 2784.

"Plant of 1-2 ft. Flowers green. Grassy openings in, and on the margins of, pine forests on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 9-10,000 ft. July 1906." G. Forrest. No. 4877.

**Hemipilia brevicarata**, Finet in Bull. Soc. Bot. France, xiv (1897), t. 14, p. 420, figs. A.-G.; I.F.S. iii, p. 62.

"Plant of 3-6 inches. Flowers purplish-rose. Boggy situations by streams in side valleys on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8-9000 ft. June 1906." G. Forrest. No. 4868.

**Hemipilia yunnanensis**, (Finet) Schltr.

*H. cordifolia*, Lindl., var. *yunnanensis*, Finet in Rev. Génér. Botan. xiii (1901), p. 510.

"Plant of 6-9 inches. Flowers rose, with markings of a deeper shade, non-fragrant. Foliage green, spotted purple on upper surface, purple on under. Stony situations on dry open banks amongst scrub on the eastern flank of the Lichiang Range. Lat. 27° 20' N. Alt. 9-10,000 ft. June 1906." G. Forrest. No. 2397.

**Hemipilia flabellata**, Bur. et Franch. in Journ. de Bot. v (1891), p. 152; I.F.S. iii, p. 62.

"Plant of 1-2 ft. Root tuberous. Sepals and petals bright rose, labellum very deep rose. Moist, shady situations amongst scrub on the eastern flank of the Lichiang Range. Lat. 27° 25'. Alt. 9-10,500 ft. August 1906." G. Forrest. No. 2844.

**Hemipilia Henryi**, Rolfe in Kew Bull. 1896, p. 203, var.

"Plant of 9-10 inches. Flowers rose-pink. Dry, shady banks in thickets in side valleys on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40'$  N. Alt. 7-9000 ft. August-September 1906." G. Forrest. No. 4890.

**Gymnadenia pseudo-diphylax**, Kränzlin in Engler's Bot. Jahrb. xxxvi, Beibl. 82, p. 25.

"Plant of  $2\frac{1}{2}$ -6 inches. Flowers rose-red. Stony mountain meadows on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 25'$  N. Alt. 9-10,500 ft. September 1906." G. Forrest. No. 2972.

"Plant of 3-4 inches. Flowers pale rose-purple. Grassy, shady situations by streams in side valleys on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40'$  N. Alt. 8-9000 ft. August 1906." G. Forrest. No. 4885.

**Platanthera japonica**, Lindl. Gen. et Sp. Orch., p. 290; I.F.S. iii, p. 56.

"Plant of 9-18 inches. Flowers green, fragrant. Grassy, shady situations on the margins of mixed and pine forests on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40'$  N. Alt. 9-11,000 ft. July 1906." G. Forrest. No. 4866.

"Lichiang Range. Lat.  $27^{\circ} 20'$  N. Alt. 10,000 ft. July 1906." G. Forrest. No. 2586.

**Platanthera Henryi**, Rolfe in I.F.S. iii, p. 55.

"Plant of 1-2 ft. Flowers green, faintly fragrant. Open grassy slopes on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 20'$  N. Alt. 10,500-11,500 ft. August 1906." G. Forrest. No. 2787.

**Platanthera interrupta**, Maxim. in Bull. Ac. Sc. St. Petersb. xxxi (1887), p. 106; I.F.S. iii, p. 56.

"Plant of 18-24 inches. Flowers green, fragrant. Stony mountain meadows on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40'$  N. Alt. 9-10,000 ft. June-July 1906." G. Forrest. No. 4861.

**Habenaria glaucifolia**, Bur. et Franch. in Journ. de Bot. v (1891), p. 152. Finet in Rev. Génér. de Bot. xiii (1901), p. 530, pl. 18, figs. 9-16.

"Plant of 1-1.5 ft. Flowers green. Root with an odour similar to valerian. Dry open situations in pine forests at the

north end of the Lichiang valley. Lat.  $27^{\circ} 20' N$ . Alt. 9-10,000 ft. July 1906." G. Forrest. No. 2746.

**Habenaria Delavayi**, Finet in Rev. Génér. de Bot. xiii (1901), p. 527, pl. 16b, figs. 16-28.

"Plant of 6-12 inches. Flowers, upper segment of perianth deep green, the remainder almost white, faintly fragrant. Dry barren pastureland at the base of the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 20'$ . Alt. 8500-9000 ft. August 1906." G. Forrest. No. 2677.

"Plant of  $1-1\frac{1}{2}$  ft. Flowers green and white, fragrant. Dry open pastureland on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 8-9000 ft. August 1906." G. Forrest. No. 4888.

**Habenaria Aitchisoni**, Rechb. f.; Finet in Rev. Génér. Bot. xiii (1901), p. 526.

"Plant of 6-9 inches. Flowers green, fleshy, fragrant. Ledges and crevices of moist cliffs, and on limestone drift on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 25' N$ . Alt. 11-12,000 ft." G. Forrest. No. 2704.

"Plant of 6-9 inches. Flowers green, fragrant, mountain meadows on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 15' N$ . Alt. 10-11,000 ft. August 1906." G. Forrest. No. 2739.

**Habenaria diplonema**, Schltr. Sp. nov. Plate lxxvii. B.

Terrestris, erecta, pusilla 8-13 cm. alta; tuberibus globosis; foliis basilaribus 2, humistratis, suborbicularibus, acuminatis utrinque glabris, pulchre nervis albis reticulato-ornatis, 1.6-2 cm. longis, medio fere 1.4-1.7 cm. latis; scapo gracili, evaginato, tereti, minutissime puberulo, racemo laxius 6-14-floro, subsecundo, usque ad 7 cm. longo; bracteis lanceolatis, acuminatis, ovario duplo fere brevioribus; floribus erectis vel erecto-patentibus, parvulis, viridibus; sepalis intermedio erecto ovali, obtusiusculo, glabro, vix 0.4 cm. longo, lateralibus deflexis, oblique ellipticis obtusiusculis, intermedio aequilongis; petalis erectis oblique subfalcato-ovatis, basi margine anteriore conspicue dilatatis, glabris, sepalis subaequilongis; labello trifido, segmentis lateralibus filiformibus 0.6-0.7 cm. longis, intermedio lineari-ligulato, subacuto, 0.2 cm. longo; calcare clavato, incurvo, c. 0.4 cm. longo; anthera apice retusa, canalibus abbreviatis, rostello humili obtusissimo; processibus stigmatiferis

clavatis, canalibus antherae plus duplo longioribus, ovario cylindraceo, minutissime puberulo c. 0.7 cm. longo.

"Plant of 3-7 inches. Flowers green, faintly fragrant. Root tuberous. Shady, dry situations on ledges of cliffs on the eastern flank of the Lichiang Range. Lat. 27° 20' N. Alt. 11-12,000 ft. August 1906." G. Forrest. No. 2812.

An ally of *H. Aitchisoni*, Rchb. f., but easily distinguished by the very long filiform side-segments of the lip. The leaves are very nicely pictured on the upper surface by white reticulated nerves.

**Habenaria diceras**, Schltr. Sp. nov. Plate lxxviii.

Terrestris, erecta, 25-35 cm. alta; foliis basilaribus 2, humistratis, suborbicularibus apiculatis, utrinque glabris, c. 5 cm. longis, medio fere 4.7-5.3 cm. latis, scapo tereti, minute puberulo, bracteis pluribus bracteiformibus obsesso; spica cylindrica dense multiflora 9-12 cm. longa, 1.7-2 cm. diametiente; bracteis erecto-patentibus lanceolatis, acuminatis, ovario aequilongis vel paulo brevioribus; floribus erecto-patentibus, parvulis, viridibus; sepalo intermedio erecto, ovato, obtuso, glabro, c. 0.7 cm. longo, lateralibus falcato-oblongis, obtusiusculis, reflexis, intermedio aequilongis; petalis oblique lanceolato-ligulatis, obtusis, glabris, erectis, sepalo intermedio aequilongis; labello trifido, segmentis lineari-subulatis 0.6 cm. longis, glabris, intermedio deflexo, lateralibus falcato-adscententibus, corniformibus, calcare filiformi-cylindrico, apicem versus paululo dilatato, glabro, 0.7 cm. longo; anthera apice retusa, canalibus abbreviatis, processibus stigmaticis subclavatis, antherae canales bene superantibus; ovario minute papilloso-puberulo, cylindraceo, c. 0.8 cm. longo.

"Plant of 6-12 inches. Flowers green. Dry, shady situations in pine forests on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 9-10,000 ft. October 1906." G. Forrest. No. 3074.

This species belongs, like *H. diplonema*, Schltr., to the section *Diphyllae*, and should be placed in the neighbourhood of *H. Aitchisoni*, Rchb. f. It is at once easily distinguished by the very dense, cylindrical spikes of smaller flowers.

**Habenaria Forrestii**, Schltr. Sp. nov. Plate lxxix.

Terrestris, erecta, gracilis, 20-25 cm. alta; tuberibus anguste oblongoideis; radicibus simplicibus flexuosis, puberulis; caule basi 2-3-foliato, caeterum vaginis paucis, acuminatis, distantibus obsesso, tereti, glabro; foliis erecto-patentibus linearibus,

acutis, glabris, 2-6 cm. longis, medio fere 2-2.5 cm. latis; spica subaxe multiflora, usque ad 12 cm. longa; bracteis erectis, ovato-lanceolatis, acuminatis, ovario plus duplo brevioribus; floribus in genere inter minores, viridibus; sepalo intermedio, erecto, ovato, obtuso, glabro, vix 0.3 cm. longo, lateralibus deflexis, falcatis, anguste oblongo-ligulatis, obtusis, glabris, sepalo intermedio aequilongis, petalis oblique ovato-lanceolatis, obtusis, sepalis paululo brevioribus; labello ligulato, obtuso, simplici, glabro ante ostium calcaris carnosio-incrassato, deflexo, petalis aequilongo, calcare cylindrico glabro, incurvulo, ovario subaequilongo; anthera apice leviter retusa, canalibus abbreviatis; rostellum semiorbiculari, parvulo; processibus stigmatiferis canales antherarum paulo superantibus, ovario cylindraco, glabro, c. 0.7 cm. longo.

"Plant of 9-12 inches. Root tuberous. Flowers green, fragrant. Dry mountain meadows on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 11-12,000 ft. September 1906." G. Forrest. No. 2875.

By the first aspect this species reminded me of *H. natalensis*, Rchb. f., with which it has somewhat the habit and the look of the flowers in common, but in the parts of its flowers it is very different, and by them belongs to a very different group in the neighbourhood of *H. leptocaulon*, Hook. f.

**Habenaria Orchidis**, (Lindl.) Hook. f. in Fl. Brit. Ind. vi, p. 142 (1890).

"Plant of 9-14 inches. Flowers white or pale pink, strongly fragrant. Grassy openings in pine forests on the eastern flank of the Lichiang Range. Lat. 27° 15' N. Alt. 11-12,000 ft. July 1906." G. Forrest. No. 2650.

**Habenaria pectinata**, Don, Prodr. p. 24; Finet in Rev. Génér. Bot. xiii (1901), p. 531.

"Plant of 1-2 ft. Root tuberous; flowers creamy or greenish-white, fleshy. Boggy situations by streams along the base of the eastern flank of the Lichiang Range. Lat. 27° 10' N. Alt. 8500-9000 ft. August 1906." G. Forrest. No. 2807, No. 4884.

**Satyrrium setchuenicum**, Kränzlin in Engler's Botan. Jahrb. xxix (1901), p. 266.

"Plant of 6-10 inches. Root tuberous, flowers rose-pink, fragrant. Dry, grassy slopes on the eastern flank of the Lichiang

Range. Lat.  $27^{\circ} 25' N$ . Alt. 9–11,000 ft. September 1906." G. Forrest. No. 3053.

"Plant of 9–18 inches. Flowers rose-pink, fragrant. Dry pastureland, and on humus-covered boulders on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 8–9000 ft. July–August 1906." G. Forrest. No. 4882.

**Satyrrium nepalense**, Don, Prodr. Fl. Nepal, p. 26; I.F.S. iii, p. 63.

"Plant of 6–9 inches. Flowers rose-purple, faintly fragrant. Grassy openings in mixed forests on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 8–10,000 ft. June 1906." G. Forrest. No. 4876.

**Pogonia yunnanensis**, Finet in Bull. Soc. Bot. France, xlv (1897), p. 419, t. 13, figs. K–F; I.F.S. iii, p. 47.

"Plant of 3–6 inches. Flowers rose-purple. Moist mountain meadows on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 9000 ft. June 1906." G. Forrest. No. 4854.

**Cephalanthera falcata**, Lindl. Gen. et Sp. Orch. p. 412; I.F.S. iii, p. 48.

"Plant of 9–15 inches. Flowers pure white, non-fragrant. Shady, rocky situations amongst scrub on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 12' N$ . Alt. 9–10,000 ft. May 1906." G. Forrest. No. 2188.

"Plant of 9–18 inches. Flowers greenish-white. Shady, damp situations in mixed and pine forests on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 8–9000 ft. May–June 1906." G. Forrest. No. 4870.

**Epipactis Royleana**, Lindl. Gen. et Sp. Orch. p. 461; I.F.S. iii, p. 49.

"Plant of 1–3 ft. Flowers dark purplish-maroon. Dry, shady, stony situations on the margins of pine forests on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40' N$ . Alt. 10,000 ft. July 1906." G. Forrest. No. 4873.

"Stony, open situations in pine forests on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 30' N$ . Alt. 11,000 ft. June 1906." G. Forrest. No. 2430, partly.

**Epipactis consimilis**, Don, Prodr. Fl. Nepal. p. 28; I.F.S. iii, p. 48.

"Plant of 10-14 inches. Flowers green. Dense, shady thickets in side valleys on eastern flank of the Lichiang Range. Lat.  $27^{\circ} 18'$  N. Alt. 11,000 ft. June 1906." G. Forrest. No. 2454.

No. 2430, partly.

**Neottia micrantha**, Lindl. Gen. et Sp. Orch. p. 458; I.F.S. iii, p. 40.

"Plant of 6-14 inches. Flowers pale brown, segments of perianth with scarious segments. In very dense, shady pine forests on a chalky soil on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 12'$ . Alt. 10,500-11,000 ft. June 1906." G. Forrest. No. 2274.

**Neottia grandiflora**, Schltr. Sp. nov. Plate lxxx.

Terrestris, erecta, saprophytica, 20-32 cm. alta; radicibus numerosis, carnosulis, flexuosis, glabratibus; caule crassiusculo, tereti, apicem versus sparsim papilloso, vaginis 4-5 alte amplexantibus obtusis obsessis, vaginis 2 superioribus suboppositis; racemo dense multifloro, cylindrico, usque ad 17 cm. longo, 3-3.5 cm. diametiente; bracteis erecto-patentibus, ellipticis obtusis, ovarium paulo superantibus, extus sparsim papilloso; rhachi papillosa; floribus in genere magnis, erecto-patentibus; sepalis extus sparsim papilloso vel subglabris, 0.6 cm. longis, intermedio oblongo, subacuto, lateralibus falcato-ellipticis apiculatis, margine anteriore medio dilatatis; petalis oblique linearibus vel lineariligulatis, apicem versus sublatioribus obtusiusculis, marginibus revolutis apice irregularibus, sepalis subaequilongis; labello circuitu cuneato-obovato, 1.5 cm. longo, supra medium usque ad 1 cm. lato, usque ad medium bilobo, lobis oblique oblongis obtusis, margine exteriori plus minusve subcrenato-irregularibus, minutissime papilloso, callo bifido parvulo in basi labelli, linea media incrassata interjecta; columna leviter arcuata, basin versus paulo dilatata, glabra, c. 0.5 cm. longa; ovario clavato, sparsim papilloso, c. 0.7 cm. longo.

"Plant of 9-14 inches. Perianth fleshy, segments rich olive-green, bordered by a lighter shade. Damp, shady situations in mixed forests on the eastern slope of the Lichiang Range. Lat.  $27^{\circ} 20'$  N. Alt. 10-10,500 ft. August 1906." G. Forrest, No. 2652.

From all other species this is well distinguished by its large flowers and the broad lobes of the labellum.

**Goodyera Schlechtendaliana**, Rchb. f. in *Linnaea*, xxii (1849), 861; I.F.S. iii, p. 46.

"Plant of 3-7 inches. Flowers light green, fragrant. Stony situations in pine forests on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 10-11,000 ft. July 1906." G. Forrest. No. 4874.

**Spiranthes chinensis**, (Pers.) Ames. *S. australis*, Lindl.; I.F.S. iii, p. 41.

"Plant of 9-15 inches. Flowers white. Grassy situations along the base of the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 9000 ft. September 1906." G. Forrest. No. 2892.

"Plant of 4-6 inches. Flowers pure waxy white. Sheltered situations amongst rocks on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 10-11,000 ft. September 1906." G. Forrest. No. 3056.

"Plant of 6-12 inches. Flowers rose. Dry mountain pasture on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8-10,000 ft. May-July 1906." G. Forrest. No. 4865.

"Plant of 3-9 inches. Flowers pale rose or greenish-white. Pastureland on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 9-10,000 ft. June-July 1906." G. Forrest. No. 4869.

"Plant of 9-15 inches. Flowers pink and white. Dry pastureland on the dividing range between the Hoching-cho and Lang-Kung Hsien valley. Lat. 26° 30'. Alt. 11-12,000 ft. August 1906." G. Forrest. No. 2883.

**Bletilla hyacintha**, (Sm.) Rchb. f. in *Botan. Zeit.* xxxvi (1878), 75. *Bletia hyacinthina*, R. Br.; I.F.S. iii, 19.

"Plant of 8-16 inches. Flowers rose-purple, marked a deeper shade. Dry, grassy situations on the margins of thickets on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8-10,000 ft. August-September 1906." G. Forrest. No. 4891.

**Arundina chinensis**, Bl. *Bijdr.* p. 402; I.F.S. iii, 27.

"Plant of 1-2 ft. Flowers white and rose-lavender. Dry, grassy situations on the hills forming the eastern boundary of the Lichiang valley. Lat. 27° 15' N. Alt. 9-10,000 ft. September 1906." G. Forrest. No. 3016.

"Plant of 1-2 ft. Flowers bright purplish-rose and yellow.

Dry, open pastureland on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40'$  N. Alt. 7-9000 ft. August 1906." G. Forrest. No. 4892.

*Trichosma suavis*, Lindl. in Bot. Reg. (1842), t. 21; Hook. f., Fl. Brit. Ind. v, p. 827.

" Plant of 10-15 inches. Flowers purple and yellow. Pine forests in the Shweli valley near Lung Ling. Lat.  $24^{\circ} 35'$  N. Alt. 6-7000 ft. March 1906." G. Forrest. No. 4976.

Not recorded from China so far.

*Coelogyne corymbosa*, Lindl., Fol. Orch., *Coelog.*, p. 7; I.F.S. iii, p. 22.

" Plant of 4-6 inches. Flowers yellow, with brown markings, fragrant. On moss-covered trees in mixed forests in side valleys on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40'$  N. Alt. 8-9000 ft. July-August 1906." G. Forrest. No. 4880.

*Pleione grandiflora*, Rolfe, sub *Coelogyne* in I.F.S. iii, p. 22.

" Plant of 2-4 inches. Flowers pure white, with a few rich lake markings. On moss-covered cliffs and boulders in shady side valleys on the eastern flank of the Tali Range. Lat.  $25^{\circ} 40'$  N. Alt. 9-10,000 ft. April-May 1906." G. Forrest. No. 4860.

*Pleione Forrestii*, Schltr. Sp. nov. Plate lxxxi.

Terrestriis, erecta, humilis, usque ad 15 cm. alta, rhizomate valde abbreviato; radicibus filiformibus elongatis, flexuosis, glabratibus; pseudo-bulbis oblique sublageniformibus, apice annulo sicco terminatis, 2-2.5 cm. altis, basi usque ad 1 cm. diametentibus, unifoliatis; foliis in speciminibus omnibus nondum evolutis, post evolutionem mox caducis; floribus proteranthiis in scapis unifloris, speciosis, illis *P. pugonioides*, Rolfe fere aequi-magnis; sepalis petalisque oblanceolato-ligulatis, obtusis, glabris, plurinervis, 4 cm. longis; labello basi columnae marginibus adnato, circuitu perlate rhombeo, obscure trilobato, c. 0.4 cm. longo, medio fere c. 3.2 cm. lato, lobis lateralibus rotundatis abbreviatis, antice margine breviter lacerato-fimbriatis, lobo intermedio multo majore subquadrato antice exciso, margine lacerato-fimbriato, carinis 7 leviter undulatis e basi labelli usque in basin lobi intermedii decurrentibus antice paulo ampliatis, nervo medio vix incrassato in basi lobi intermedii in lamellam brevem

satis altum producto; columna gracili, leviter curvata, c. 3 cm. longa, apicem versus dilatata, clinandrio lobulato; ovario clavato, glabro, pedicello incluso c. 1.5 cm. longo.

"Plant of 2-4 inches. On moss-covered boulders and cliffs in shady side valleys on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 9-10,000 ft. April-May 1906." G. Forrest. No. 4859.

According to Mr. Forrest the flowers of this remarkable species are bright orange, with brown markings. It must then be a very fine species resembling certain forms of *Crocus* at first sight. Its nearest ally seems to be *P. grandiflora*, Rolfe, but in this the crests of the lip are quite different.

**Pleione Delavayi**, Rolfe, sub *Coelogyne*, in I.F.S. iii, p. 21.

"Plant of 1½-4 inches. Flowers bright purplish-rose, with darker markings. Open mountain pasture on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 7500-9000 ft. May-July 1906." G. Forrest. No. 4858.

**Pleione Henryi**, Rolfe, sub *Coelogyne*, in Kew Bull. (1896), p. 195; I.F.S. iii, p. 22.

"Plant of 4-8 inches. Flowers, appearing before foliage is developed, magenta-rose, with darker markings on labellum. Crevices of cliffs and dry, stony situations on the eastern flank of the Lichiang Range. Lat. 27° 12' N. Alt. 9-10,500 ft. June 1906." G. Forrest. No. 2346.

**Pleione yunnanensis**, Rolfe, sub *Coelogyne*, in I.F.S. iii, p. 23.

"Plant of 3-4 inches. Flowers bright rose. Dry mountain pasture on the eastern flank of the Salwin valley. Lat. 25° N. Alt. 7,000 ft. April 1906." G. Forrest. No. 5012.

**Pleione sp.**

Imperfect specimen. No flowers.

"Plant of 2-4 inches. Flowers brown. On trunks of trees in mixed forests in side valleys on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8-9000 ft. July 1906." G. Forrest. No. 4871.

**Pleione sp.**

Imperfect specimen. No flowers.

"Plant of 2-4 inches. Flowers olive-brown. On trees in mixed forests on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 9-10,000 ft. August 1906." G. Forrest. No. 4889.

**Bulleyia**, Schltr. Gen. nov.

Sepala oblonga, lateralia basi ampliata, obliqua. Petala sepalis similia oblonga. Labellum calcaratum e basi concava in laminam circuitu oblongam supra medium subarticulato-constrictam antice sursum dilatatam expansam, petalis fere aequimagnum, calcare curvato-porrecto, cylindrico. Columna gracilis, apicem versus dilatata, clinandrio more tribus ampliata, margine denticulato. Stigma marginatum; anthera subreniformi-cucullata, brevis. Pollinia 4 compressa, oblique obovata, basi cohaerentia. Ovarium breve, subsessile.

Species una adhuc nota yunnanensis.

This genus, which seems to be nearest allied to *Pholidota*, Lindl., is very remarkable in the group of the *Coelogyninae* by the presence of a spur at the base of the labellum, a character which as yet has never been observed in any genus of this affinity. From *Pholidota* it is besides distinguished by the slender column.

It gives me great satisfaction to be able to dedicate this genus to Mr. A. K. Bulley, who by sending out such an able collector as Mr. G. Forrest has greatly advanced our knowledge of the Flora of the more unknown parts of China.

**Bulleyia yunnanensis**, Schltr. Sp. nov. Plate lxxxii.

Epiphytica, erecta, usque ad 35 cm. alta; rhizomate abbreviato, dense pseudobulbis obsessa; radicibus filiformibus, elongatis, flexuosis, villosis; pseudobulbis ovoideis, lateraliter compressis, mox rugoso-sulcatis, c. 4 cm. altis, infra medium c. 2 cm. latis, bifoliatis; foliis erecto-patentibus erectisve petiolatis, lamina lanceolata, acuminata, basi sensim angustata, c. 20 cm. longa, medio fere c. 2.5 cm. lata, petiolo sulcato, c. 5 cm. longo; scapo cum foliis juvenilibus synantho inflorescentia inclusa c. 30 cm. longo, pedunculo, bracteis paucis ad basin inflorescentiae imbricatis exceptis, ebracteato, gracili, tereti, glabro; rhachi valde flexuoso-racemo subaxe 10-15-floro, bifario; bracteis persistentibus patentibus amplis, suborbicularibus apiculatis, floribus paulo brevioribus; floribus inversis, bene magnis, flavidis, sepalis ovato-oblongis, apiculatis, glabris, c. 2 cm. longis, laterali-bus obliquis basi margine anteriore ampliatis; petalis oblique elliptico-oblongis subapiculatis glabris, sepalis subaequilongis sed paulo laterioribus; labello circuitu oblongo, basi concavo, supra medium subito constricto et antice in lobum obreniformem emarginatum expanso, nervis 3 carinato-incrassatis in isthmo, petalis aequilongo, calcare cylindraco, arcuato-porrecto, obtusi-usclo, inter sejala abscondito, dimidium labelli subattingente; columna generis, glabra, 1.2 cm. longa; ovario clavato c. 0.4 cm. longo, glabro.

" Plant of 9-15 inches. Flowers yellowish. On trunks of trees and humus-covered boulders in mixed forests on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8-9000 ft. July-August 1906." G. Forrest. No. 4879.

This remarkable plant at first sight has the appearance of a large flowered species of *Pholidota*, as the spur of the labellum is hidden between the sepals. The presence of a genus with a spurred labellum is most unexpected in the group *Coelogyninae*, as hitherto, with the exception of small concavities at the base of the labellum, nothing like it is known in this affinity.

***Microstylis yunnanensis*, Schltr. Sp. nov. Plate lxxxiii.**

Terrestris, erecta 10-23 cm. alta; rhizomate abbreviato, bulbis ut videtur subterraneis, approximatis, oblique ovoideis, vaginis mox in fibros solutis circumdatis, usque ad 1.5 cm. longis, infra medium 0.7 cm. diametro; foliis vulgo 2, interdum singulis, erecto-patentibus, petiolo scapum basi alte vaginantibus, lamina oblonga vel elliptica, obtusiuscula, utrinque glabra, 2.5-5 cm. longa, 1.5-2.5 cm. medio lata, petiolo lato usque ad 4 cm. longo; scapo erecto, stricto, folia bene superante, pedunculo leviter angulato, glabro, racemo subdense multifloro, cylindraceo, usque ad 11 cm. longo, 1.6-1.8 cm. diametiente; bracteis erecto-patentibus lanceolatis acuminatis, ovario duplo-brevioribus; floribus illis *M. muscifera*, Ridl. similibus sed multo majoribus, erecto-patentibus, glabris, sepalis lanceolatis longe acuminatis c. 0.5 cm. longis, lateralibus obliquis; petalis oblique lineari-lanceolatis, longe acuminatis, 0.3 cm. longis; labello e basi auriculato-cordata ovata, infra medium angustato, lanceolato, acuminato, 0.5 cm. longo, intus carinis 2 carnosulis e basi usque ad marginem infra medium labelli decurrentibus, nervis 3 medianis in basi labelli subincrassatis; columna brevi crassiuscula, anthera ovata obtusa; ovario clavato, glabro, pedicello incluso c. 0.6 cm. longo.

" Plant of 3-9 inches. Flowers greenish-yellow, faintly fragrant. Mountain meadows on the eastern flank of the Lichiang Range. Lat. 27° 15' N. Alt. 11-12,000 ft. July 1906." G. Forrest. No. 2627.

Undoubtedly an ally of *M. muscifera*, Ridl., but easily distinguished by the larger flowers with longer drawn out segments, and the form of the labellum.

***Oreorchis patens*, Lindl. in Journ. Linn. Soc. iii (1859), 27.**

" Plant of 6-9 inches. Flowers, sepals and petals brownish, labellum yellowish-green, spotted reddish-brown, fragrant.

Open pine forests on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 12' N$ . Alt. 10-11,000 ft. June 1906." G. Forrest. No. 2287.

"Flowers darker than in No. 2287. Plant of 6-10 inches. Flowers brownish-green, labellum spotted reddish-brown, fragrant. On humus-covered boulders in open situations on limestone drift on the eastern flank of the Lichiang Range. Lat.  $27^{\circ} 12'$ . Alt. 11,000 ft. June 1906." G. Forrest. No. 2288.

**Oreorchis micrantha**, Lindl. in Journ. Linn. Soc. iii, p. 27; Hook. f. in Fl. Brit. Ind. v (1890), p. 709.

"Plant of 9-14 inches. Flowers appearing before foliage, olive-brown, labellum lighter in colour, and spotted purple, fragrant. Very moist, grassy, shady situations by side of stream on eastern flank of the Lichiang Range. Lat.  $27^{\circ} 25' N$ . Alt. 11,000 ft. June 1906." G. Forrest. No. 2472.

Like the former, not recorded before from China.

**Eulophia Faberi**, Rolfe in Kew Bull. 1896, p. 198; I.F.S. iii, p. 28.

"Plant of 12 inches. Petals and sepals brownish-pink, labellum pink, with darker markings. Dry, stony ground at the south end of the Lang Kung Hsien valley near Kai-Hsi-dsi. Lat.  $26^{\circ} 10' N$ . Alt. 7500 ft. April 1906." G. Forrest. No. 2093.

**Calanthe undulata**, Schltr. Sp. nov. Plate lxxxiv.

Terrestris, erecta, c. 40 cm. alta; rhizomate abbreviato; radicibus filiformibus elongatis, flexuosis, pilosis; foliis basilaribus c. 3 erecto-patentibus ellipticis, acuminatis, plicatis, basi subpetiolato-angustatis, utrinque glabris, sub anthesi (nondum omnino evolutis, usque ad 20 cm. longis, medio fere usque ad 6 cm. latis; scapo erecto, folia bene superante dimidio superiore laxe plurifloro (c. 17) sparsim puberulo; bracteis ellipticis, acutis, patentibus, ovario pedicellato multo brevioribus; floribus mediocribus, erecto-patentibus; sepalis patentibus, c. 1.5 cm. longis, extus minute puberulis, intermedio latius ovali, acuto, lateralibus falcato-ellipticis, subacutis, petalis oblique obovato-spathulatis, obtusis, sepalis paululo brevioribus; labello e basi trilobo, petalis aequilongo, lobis lateralibus basalibus divergentibus subreniformi-flabellatis, margine undulatis, lobo medio late reniformi antice alte bifido, margine undulato, 0.7 cm. longo infra medium c. 1.2 cm. lato, e basi lamellis 3 altis, crenulatis, hinc inde lateraliter dentatis usque infra apicem ornato; sacco basalio oblongoideo-hemisphaerico, perbrevis extus puberulo

basibus sepalorum abscondito; columna brevi, crassiuscula, anthera late ovato-cucullata, glabra; ovario subclavato, puberulo, pedicello incluso c. 1.7 cm. longo.

"Plant of 1-1½ ft. Non-fragrant. Shady, dry situations amongst shrubs in a side valley on the eastern flank of the Lichiang Range. Lat. 27° 12' N. Alt. 9-10,000 ft. June 1906." G. Forrest. No. 2345.

A very distinct species, easily recognised by the form of the labellum, and the short saccate form of the base of the lip. Mr. Forrest gives the colour of the flowers as follows: "Petals and sepals dull yellow. Rostellum and labellum deep maroon."

**Calanthe Delavayi**, Finet in Bull. Soc. Bot. Franch. xlvii, p. 434. (*C. coelogyniformis*, Kränzl.)

"Plant of 6-12 inches. Flowers rose-purple. Moist, shady situations in thickets and mixed forests in side valleys on the eastern flank of the Tali Range. Lat. 25° 40'. Alt. 9000 ft. June 1906." G. Forrest. No. 4872.

"Plant of 9-16 inches. Flowers of a pale watery whitish-rose, veined and marked a deeper shade of rose, non-fragrant. Stony, moist situations in open pine forests on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 10-11,000 ft. June 1906." G. Forrest. No. 2496.

**Calanthe buccinifera**, Rolfe in Journ. Linn. Soc., Bot. xxix (1892), p. 318; I.F.S. iii, p. 25.

"Plant of 9-12 inches. Flowers rich rose-purple, labellum a darker shade of same, non-fragrant. Amongst and on moss-grown boulders in dense shady pine forests on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 11,000 ft. June 1906." G. Forrest. No. 2495.

**Spathoglottis Fortunei**, Lindl. Gen. et Sp. Orch. p. 120; I.F.S. iii, p. 18.

"Plant of 10-15 inches. Flowers bright yellow and chocolate brown. Dry, clayey pasture on the eastern flank of the Tali Range. Lat. 25° 40'. Alt. 7-9000 ft. August 1906." G. Forrest. No. 4883.

**Dendrobium clavatum**, Wall. Cat. n. 2004; I.F.S. iii, p. 10.

"Plant of 1-1½ ft. Flowers deep orange, with orange-brown markings. Dry ledges and crevices of cliffs in side valleys on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 7-9000 ft. July-August 1906." G. Forrest. No. 4881.

**Cymbidium grandiflorum**, Griff. Not. iii, p. 342; I.F.S. iii, p. 30.

"Plant of 1-3 ft. Flowers yellowish-green, with brown markings, very fragrant, with a strong vanilla-like perfume. In thickets and mixed forests generally on oak, on the eastern flank of the Tali Range. Lat.  $25^{\circ}40'$ . Alt. 7-9000 ft. August-October 1906." G. Forrest. No. 4857.

Within China, this had not been recorded north of Meng-tze.

**Cymbidium longifolium**, Don, Prodr. Fl. Nepal. p. 36; I.F.S. iii, p. 31.

"Flowers green, with purple markings, fragrant. Ledges and clefts of cliffs on the eastern flank of the Tali Range. Lat.  $25^{\circ}40'N$ . Alt. 8-9000 ft. July-August 1906." G. Forrest. No. 4856.

**Cymbidium virescens**, Lindl. in Bot. Reg. 1838, Misc. p. 37.

Yunnan, 1904. G. Forrest. No. 328.

**Cyperorchis elegans**, (Lindl.) Bl. Rumph. iv, t. 47. Hook. f., in Flor. Brit. Ind. vi (1894), p. 14.

"Growing at China Inland Mission, Talifu. Alt. 6500 ft. Yunnan, 1904." G. Forrest. No. 335.

"Plant of  $1\frac{1}{2}$ -2 ft. Flowers dirty greenish-yellow, corolla thick, fleshy. Ledges of moist, shady rocks, overhanging streams. Side valleys of the Salwen, Salwen-Irrawadi divide. Lat.  $26^{\circ}N$ . Alt. 6000 ft. October 1905." G. Forrest. No. 964.

Subtropical Himalaya, Khasia and Munnipore; not recorded from China so far.

**Saccolabium distichum**, Lindl. in Journ. Linn. Soc. iii, p. 36. Hook. f., in Fl. Brit. Ind. vi (1894), p. 64.

"Procumbent plant of 3-9 inches. Flowers greenish-white. Moist, shady situation on rocks in side valleys on the eastern flank of the Lichiang Range. Lat.  $27^{\circ}25'N$ . Alt. 10-11,000 ft. October 1906." G. Forrest. No. 3101.

"Succulent plant of 3-4 inches. Forming tufts on dry ledges of cliffs, moss-covered rocks and trees in shady situations in side valleys on the eastern flank of the Tali Range. Lat.  $25^{\circ}40'N$ . Alt. 8-10,000 ft. July-August 1906." G. Forrest. No. 4722.

This is known from Sikkim to Munnipore, but recorded up to 8000 ft. only. It is new for China.

## LIST OF PLATES.

Illustrating Dr. Rudolf Schlechter's Paper on Species of Orchidaceae  
collected by George Forrest in Yunnan and Eastern Tibet.

The plates are taken from photographs by Mr. R. Adam of dried  
specimens in the Herbarium of the Royal Botanic Garden, Edinburgh.

- PLATE LXXVI. *Herminium ophioglossoides*, Schltr. Sp. nov.  
LXXVIIA. *Herminium Forrestii*, Schltr. Sp. nov.  
LXXVIIb. *Habenaria diplonema*, Schltr. Sp. nov.  
LXXVIII. *Habenaria diceras*, Schltr. Sp. nov.  
LXXIX. *Habenaria Forrestii*, Schltr. Sp. nov.  
LXXX. *Neottia grandiflora*, Schltr. Sp. nov.  
LXXXI. *Pleione Forrestii*, Schltr. Sp. nov.  
LXXXII. *Bulleyia yunnanensis*, Schltr. Sp. nov.  
LXXXIII. *Microstylis yunnanensis*, Schltr. Sp. nov.  
LXXXIV. *Calanthe undulata*, Schltr. Sp. nov.





PLANTS OF S. TIBET AND S.W. CHINA.

Collected by GEORGE FODDIE.

Specimens for R. & S. DULLY at SEAN, NESTON, CHESHIRE.

2466

Plant of 3-4 inches. Flowers  
greenish yellow, non fragrant.  
Hairs, mossy, situated on  
backs of stems at base of  
raceme of plant of the Hekling  
Range.

Lat. 27° 12' N. No 2466

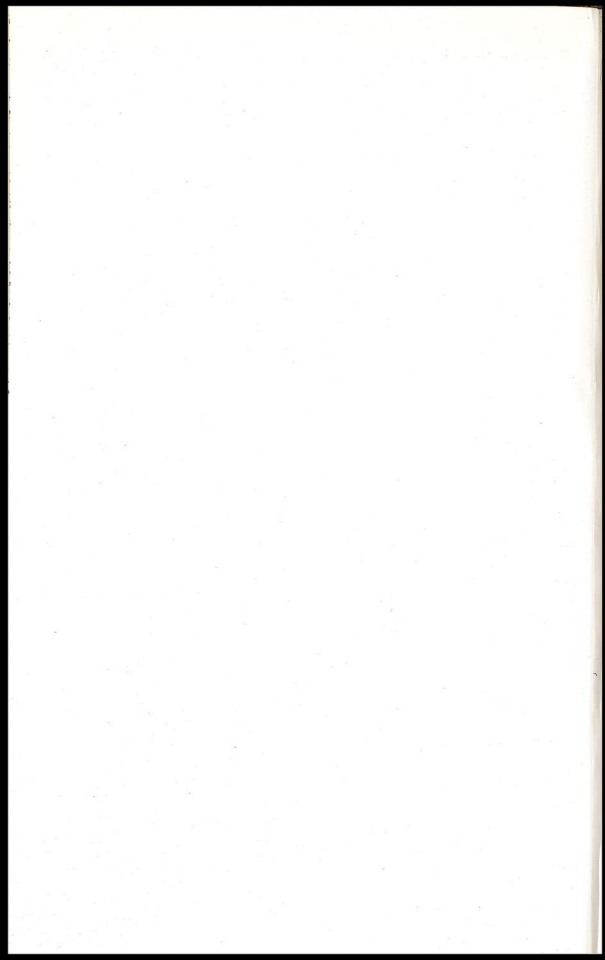
Alt. 10000 ft.

June 1895.

Alt. Yunnan, China.

*Herminium ophioglossoides* Schltr.  
n. sp.

*Herminium ophioglossoides*, Schltr.





B

PLANTS OF E. TIDET AND S.M. CHEN.

COLLECTED BY GEORGE FORREST.

COLLECTED FOR A. K. BULLY OF REEF, NESTON, CHESHIRE.

*Habenaria dipylonema*

Plants 4-5 inches. Flowers white.  
Faintly fragrant. Not tuberous.  
Plants dry, situated on edges of  
cliffs on the western flank of the  
Himalayas.

Alt. 20,000 ft. No. 11-12000 ft.  
July 1890. No. 11-12000 ft.

*Habenaria dipylonema*, Schltr.



A

*Herminium Forrestii*

PLANTS OF E. TIDET AND S.M. CHEN.

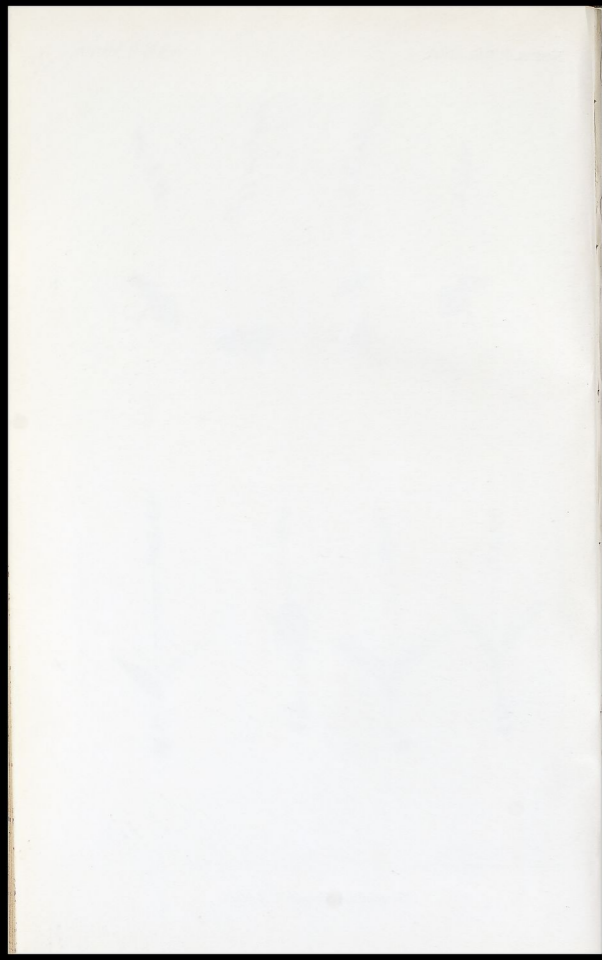
COLLECTED BY GEORGE FORREST.

COLLECTED FOR A. K. BULLY OF REEF, NESTON, CHESHIRE.

Plants 4-5 inches. Flowers  
white. Fragrant. Not tuberous.  
Plants dry, situated on edges of  
cliffs on the western flank of the  
Himalayas.

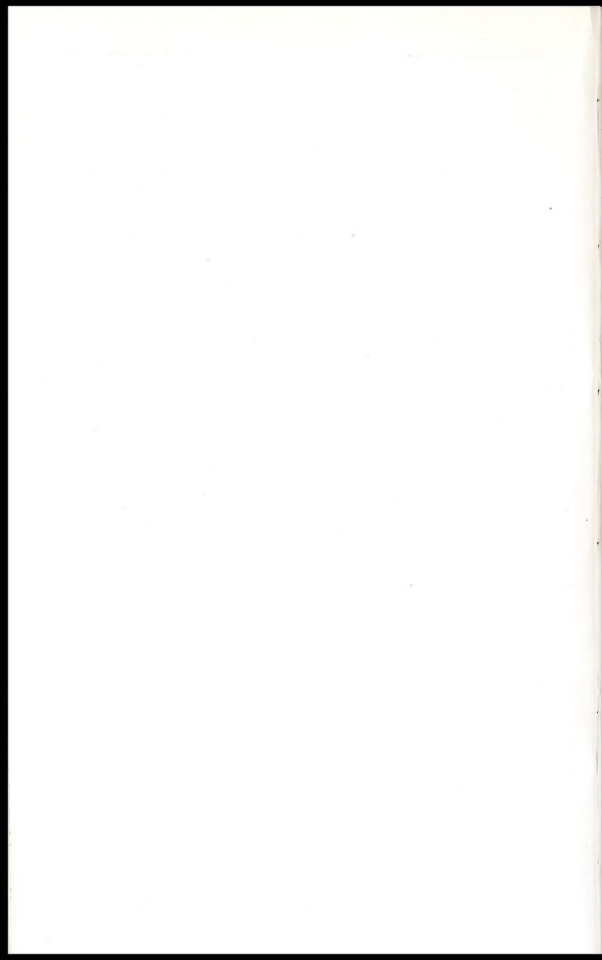
Alt. 20,000 ft. No. 11-12000 ft.  
July 1890. No. 11-12000 ft.

*Herminium Forrestii*, Schltr.





*Habenaria diceras*, Schltr.









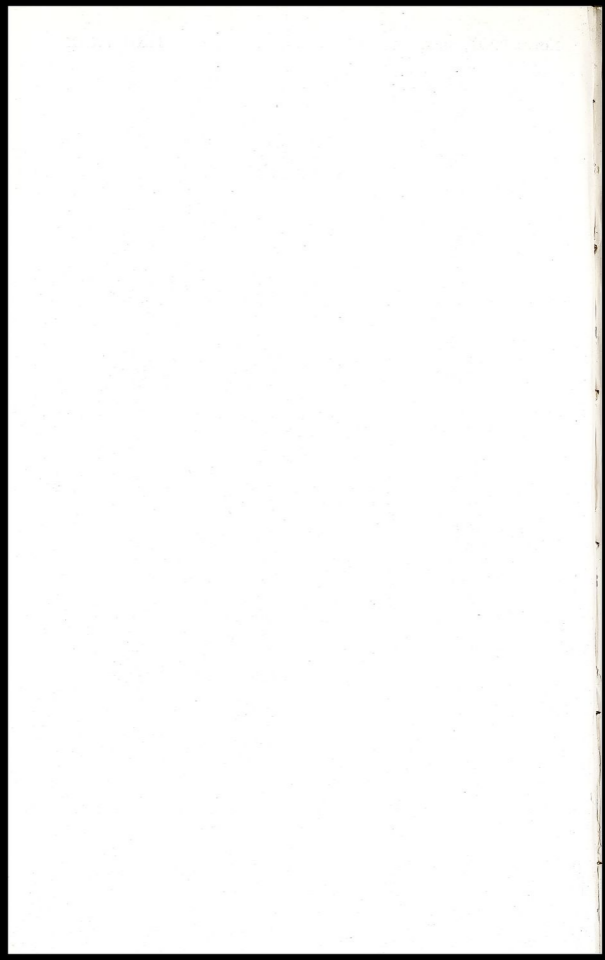
PLANTS OF E. THURGOOD & CO. COGNAC.  
GROWN IN THE GARDEN.  
OBTAINED FOR A. C. BULLY OF NEW WESTON, ENGLAND.

Plant of 9-10 inches. Perianth green,  
sepals white, calyx green, border  
of all her shade.  
Thy. green, situated in the  
folds of the leaves. Faint of the  
faintest shade.

Lat. 45° 30' N. Alt. 10-15 ft.  
E. 100. . . . .

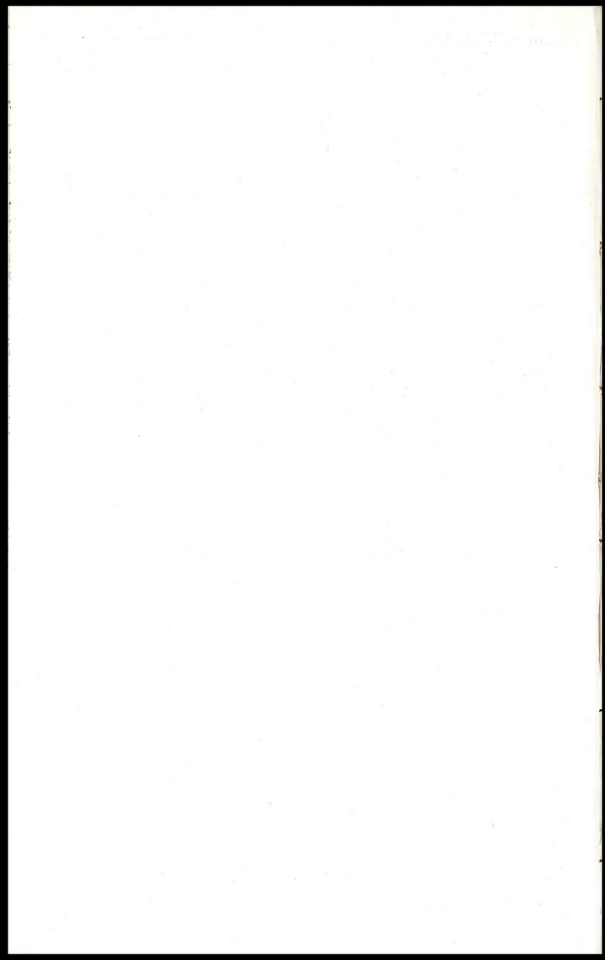
*Neottia grandiflora* Schltr.  
n. sp.

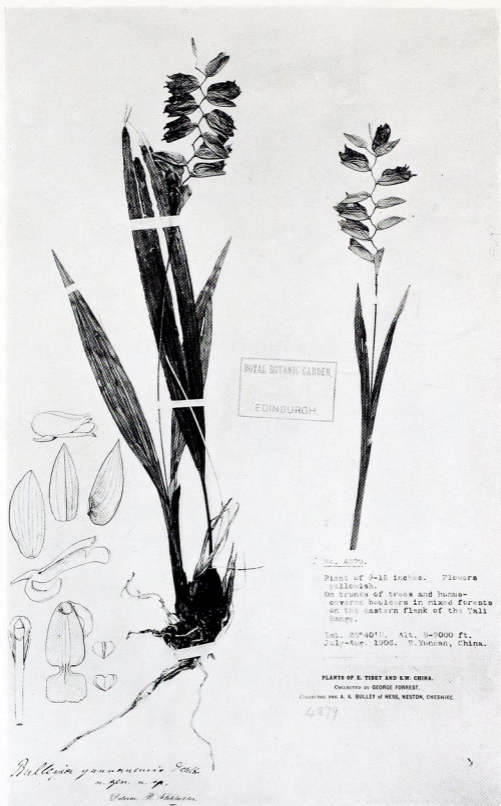
*Neottia grandiflora*, Schltr.



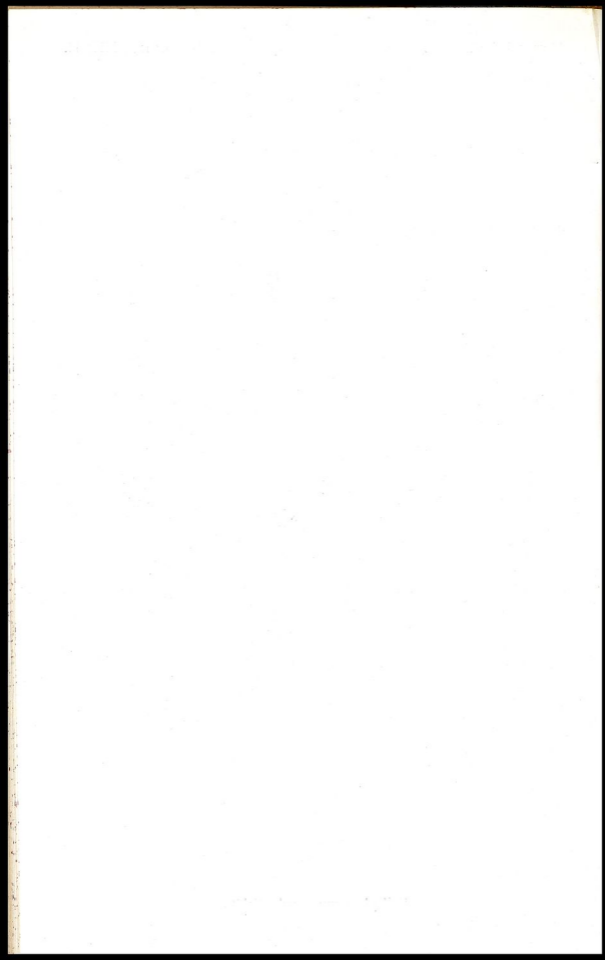


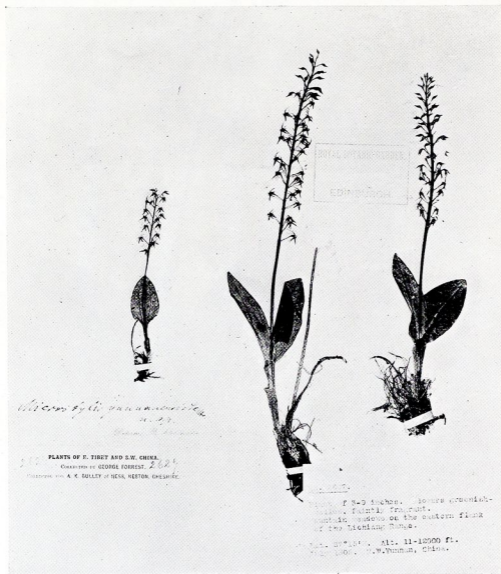
*Pleione Forrestii*, Schltr.



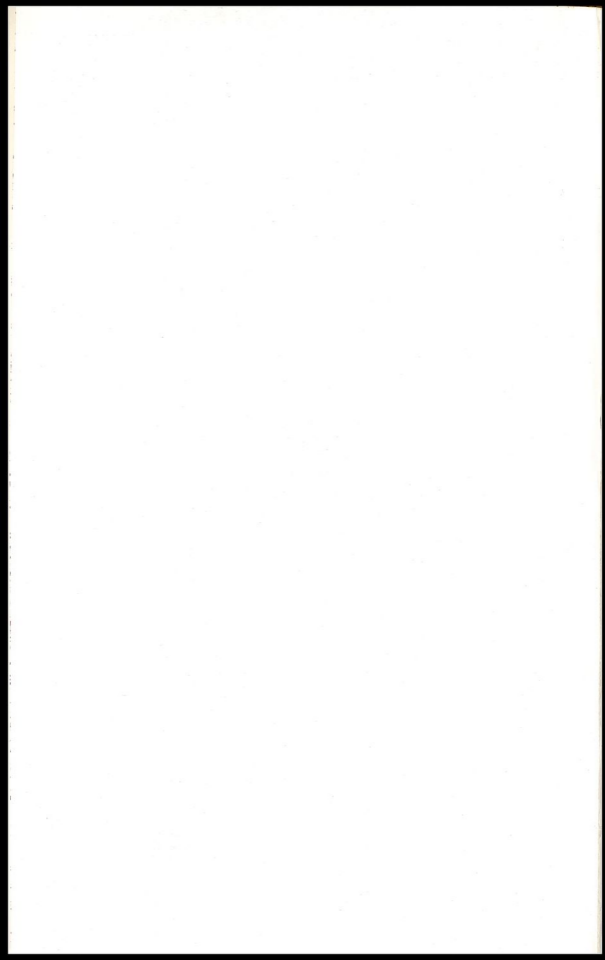


*Bulleyia yunnanensis*, Schltr.





*Microstylis yunnanensis*, Schltr.





*Calanthe undulata* Schltr.  
K. 19.  
Horn & Co. Ltd.

PLANTS OF E. TIOET AND S.W. CHINA.  
Illustrated by GEORGE FOREST.  
Published for A. R. BULLOCK of NESS, NESTON, CHESHIRE.

Plant 2-3 ft. high. Petals and  
sepals dull yellow. Perianth  
and labellum deep maroon.  
Non-fragrant.  
Only dry cultivation amongst  
seeds in a side valley on the  
eastern flanking the Kiching  
range. Loc. 2500 ft. No. 2345  
alt. 2-3000 ft.  
June 1905.  
H. S. G. China.

